

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An optical transmission system, comprising an optical communication apparatus, a communicating party of said optical communication apparatus, and a monitor for performing monitoring of optical signals transmitted and received between said optical communication apparatus and said communicating party;

wherein said optical communication apparatus comprises:

an optical branching transmitting device means for branching optical signals to be transmitted to said communicating party into first optical signals and second optical signals;

a first transmit interface coupled to receive said first optical signals from said optical branching transmitting device, said first transmit interface connected to only to a single optical cable for transmitting said first optical signals to said communicating party; and

a second transmit interface coupled to receive said second optical signals from said optical branching transmitting device and for transmitting said second optical signals to said monitor;

a receive interface coupled to receive optical signals from said communicating party and providing received optical signals;

an optical branching receiving device connected to said receive interface for receiving said received optical signals and for branching said received optical signals into third and fourth optical signals;

additional circuitry of said optical communicating apparatus connected to receive said third optical signals from said optical branching receiving device;

a third transmit interface connected to receive said fourth optical signals from said optical branching receiving device and for transmitting said fourth optical signals to said monitor;

conducting means for conducting said optical signals to be transmitted and said received optical signals that have been branched by said optical branching means, to said monitor, and

wherein said monitor performs monitoring of the data contents of said second and fourth optical signals to be transmitted and said received optical signals that have been conducted from said conducting means.

2. (Currently Amended) The optical transmission system according to claim 1, wherein said conducting means comprises:

a first transmit interface for conducting to said monitor said optical signals to be transmitted; and

a second transmit interface for conducting to said monitor said received optical signals, and

wherein said monitor comprises two mutually independent monitors: a monitor for performing monitoring of the data contents of said second optical signals to be transmitted that have been conducted from said first transmit interface, and a monitor for performing monitoring of the data contents of said fourth received optical signals that have been conducted from said second transmit interface.

3. (Currently Amended) The An optical transmission system as recited in claim 1, comprising an optical communication apparatus, a communicating party of said optical communication apparatus, and a monitor for performing monitoring of optical signals transmitted and received between said optical communication apparatus and said communicating party,

wherein said additional circuitry of said optical communication apparatus is located remotely of said optical branching transmitting device, said optical branching receiving device, said first, second and third transmit interface and said receive interface. optical transmission system comprises an optical external conducting apparatus, located between said optical communication apparatus and said communicating party, that includes optical branching means for branching said optical signals and conducting means for conducting said optical signals that have been branched by said optical branching means, to said monitor, and

wherein said monitor performs monitoring of the data contents of said optical signals that have been conducted from said conducting means.

4. (Cancelled)

5. (Original) The optical transmission system according to claim 1, wherein said data contents are signaling information necessary for data exchange.

6. (Currently Amended) A monitoring method for an optical transmission system comprising an optical communication apparatus, a communicating party of said optical communication apparatus, and an external monitor for performing monitoring of optical signals transmitted and received between said optical communication apparatus and said communicating party, comprising:

in said optical communication apparatus, a transmitting an optical branching step of branching optical signals to be transmitted to said communicating party into first and second optical signals;

a first interface transmitting step of transmitting said first optical signals received as a result of said transmitting branching step to said communicating party along only a single optical cable;

a second interface transmitting step of transmitting said second optical signals received from said first transmitting branching step to said monitor;

an interface receiving step of receiving optical signals from said communication party;

a receiving optical branching step of branching optical signals received from said interface receiving step into third and fourth optical signals;

an additional receiving step of receiving said third optical signals into additional circuitry of said optical communication apparatus;

a third interface transmitting step of transmitting said fourth optical signal to said monitor; and

and optical signals received from said communicating party, and a conducting step of conducting said optical signals to be transmitted and said received optical signals that have been branched in said optical branching step, to said external monitor; and

in said monitor, a monitoring step of performing monitoring of the data contents of said second and fourth optical signals to be transmitted and said received optical signals that have been conducted in said conducting step.

7. (Currently Amended) The A-monitoring method as recited in claim 6, wherein said first interface transmitting step, said second interface transmitting step, said interface receiving step, said receiving optical branching step and said third interface transmitting step are performed in for an optical transmission system comprising an optical communication apparatus, a communicating party of said optical communication apparatus, and an external monitor for performing monitoring of optical signals transmitted and received between said optical communication apparatus and said communicating party, comprising:

in an optical external conducting apparatus remote from remaining parts of said optical communication apparatus, located between said optical communication apparatus and said communicating party, an optical branching step of branching said optical signals, and a conducting step of conducting said optical signals that have been branched in said optical branching step, to said external monitor; and

in said monitor, a monitoring step of performing monitoring of the data contents of said optical signals that have been conducted in said conducting step.

8. (Original) The monitoring method according to claim 6, wherein said data contents are signaling information necessary for data exchange.

9.-14. (Cancelled)